

WHAT IS CLAIMED IS:

1. A circuit arrangement, comprising:
a transmission unit for inserting data belonging to at least one terminal
equipment type in a frame, said transmission unit comprising an insertion mechanism
for inserting said data of the terminal equipment of the terminal equipment types, said
data of all terminal equipment types being synchronously inserted into said frame and
transmitted with a digital time-division multiplex technique.

2. A circuit arrangement, comprising:
a reception unit for dividing a datastream transmitted in a frame by a
transmitter to at least one terminal equipment type; and
a switch module for a purpose-conforming division of said datastream, in
which a further division onto further terminal equipment of a terminal equipment type
is undertaken based on control data.

3. A circuit arrangement, comprising a transmission-reception unit which
comprises said transmission unit of claim 1, and said reception unit of claim 2.

4. A method for transmitting a data stream in a frame belonging to at least
one terminal equipment type, comprising the steps of:

synchronously inserting data of all terminal equipment types into said frame in
a first unit;

transmitting said data to a second unit with a time-division multiplex method;
and

dividing said data stream to terminal devices of at least one terminal
equipment type in said second unit.

5. A method according to claim 4, further comprising the step of
depositing data for operational control of a connection to which at least one terminal
equipment is connected in an operating eoc channel of said frame.

6. A method according to claim 5, wherein said connections are telephony connections, ISDN connections or broadband connections.

7. A method according to claim 4, further comprising the step of filling a payload data region available in a frame in a terminal equipment-specific manner depending on a transmission rate of a transmission link.

8. A method according to claim 4, further comprising the step of connecting a plurality of terminal equipment of at least one terminal equipment type to a transmission-reception unit.

9. A method according to claim 4, further comprising the steps of:
providing bits for operational control in said data belonging to a terminal equipment type; and
arranging said bits outside of a payload data region provided for said terminal equipment.

10. A method according to claim 9, wherein said bits for operational control are arranged in an overhead of said frame.

11. A method according to claim 10, further comprising the steps of:
allocating said bits for operational control to an operating eoc channel; and
addressing said bits for operational control via a sub-address in a message format of said operating channel.

12. A method according to claim 4, further comprising the step of accepting data of a plurality of ISDN connections in said frame, said frame being a symmetric digital subscriber line frame.

13. A method according to claim 4, further comprising the step of accepting data of a plurality of traditional telephony connections in said frame, said frame being a symmetric digital subscriber line frame.

5 14. A method according to claim 4, wherein said step of transmitting said data comprises transmitting said data of the symmetric digital subscriber line frame synchronously on a transmission link between said first unit, which is a network node, and said second unit, which is a network termination unit with a time-division multiplex method.

10 15. A method according to claim 4, further comprising the step of synchronously transmitting said data of said frame intended for individual terminal equipment types or terminal equipment in time-division multiplex.